

ABSTRACT OF THE DISCLOSURE

An air diffusing vacuum transport belt including a first perforated layer and a second non-perforated layer is provided for transporting image carrying substrates without vacuum belt induced image defects. The first perforated layer includes a top surface and a bottom surface, solid areas, and perforated hole areas interspersing the solid areas for directing pressurized airflow from the top surface through to the bottom surface. The air diffusing vacuum transport belt also includes a second non-perforated layer formed over the top surface of the first perforated layer and covering the solid areas and the perforated hole areas. The second non-perforated layer has an inner surface positioned over the top surface of the first perforated layer, and an outer surface for uniformly supporting substrates. The second non-perforated layer as such is porous to air for diffusing pressurized airflow from the outer surface thereof into the perforated hole areas of the first perforated layer, thereby enabling transporting of image carrying substrates without vacuum belt induced image defects.